

CLAIMS:

1. A discharge lamp having a reflector and cooling means, which cooling means has at least one nozzle (3; 31, 32, 33, 34) through which a flow of gas can be directed onto the discharge lamp, wherein the at least one nozzle (3; 31, 32, 33, 34) is arranged such that it does not extend, at least to any substantial degree, into a beam path produced by the lamp (2) and the reflector (1).
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2. A discharge lamp as claimed in claim 1, wherein the at least one nozzle (3; 31, 32, 33, 34) is inserted in a hole in the reflector (1).
- 10 3. A discharge lamp as claimed in claim 1, wherein the velocity of the flow of gas emerging from the at least one nozzle (3, 31, 32, 33, 34) is of a value such that a turbulent flow is produced that surrounds at least part of the lamp (2).
4. A discharge lamp as claimed in claim 1, wherein at least two nozzles (31, 32; 15 33, 34) that are at an angle to one another are directed at the discharge lamp (2) such that a turbulent flow is produced that surrounds at least part of the lamp (2).
5. A discharge lamp as claimed in claim 4, wherein the nozzles (31, 32; 33, 34) are at an angle of approximately 90° to one another.
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6. A discharge lamp as claimed in claim 1, wherein a first sensor (41) is arranged adjacent at least one of the nozzles (3; 31, 32, 33, 34) to sense the velocity and/or the pressure and/or the flow-rate of a flow of gas passing through the nozzle (3; 31, 32, 33, 34).
- 25 7. A discharge lamp as claimed in claim 1, wherein at least one first nozzle (31, 32) is directed at a region of the discharge vessel (21) that is at the top in the position in which the discharge lamp (2) is operating, and at least one second nozzle (33, 34) is directed at a region of the discharge vessel (21) that is at the bottom in this same operating position.

8. A discharge lamp as claimed in claim 7, wherein the velocity of the flow of gas passing through at least one of the nozzles (3; 31, 32, 33, 34) can be controlled as a function of the operating position of the discharge lamp (2).
- 5 9. A discharge lamp as claimed in claim 7, wherein a second sensor (12) is provided to sense the operating position of the discharge lamp (2) and to control the velocity of the flow of gas passing through at least one of the nozzles (3; 31, 32, 33, 34) as a function of the operating position.